

Title (en)  
Blast furnace and method of operation.

Title (de)  
Hochofen und Verfahren zum Betrieb.

Title (fr)  
Haut-fourneau et méthode de conduite.

Publication  
**EP 0023716 A1 19810211 (EN)**

Application  
**EP 80104566 A 19800801**

Priority  
• JP 6742880 A 19800521  
• JP 9864479 A 19790803

Abstract (en)  
[origin: US4377277A] A blast furnace having a cooling device between its hearth bottom and its foundation. The cooling device includes top and bottom groups of cooling fluid passages with a heat-insulating layer disposed therebetween, the top and bottom groups having independently regulable cooling capacities. Also provided is a method for operating a blast furnace including the steps of measuring a temperature in the hearth bottom, and controlling the cooling of the hearth bottom so that the specification point of the molten product in the hearth bottom maintains a predetermined level.

IPC 1-7  
**C21B 7/10**

IPC 8 full level  
**C21B 7/10** (2006.01)

CPC (source: EP US)  
**C21B 7/106** (2013.01 - EP US)

Citation (search report)  
• [X] FR 2190919 A2 19740201 - WIECZOREK JULIE [FR]  
• [A] US 2915305 A 19591201 - HERBERT CRAIG GEORGE  
• FR 2119167 A5 19720804 - WIECZOREK JULIEN  
• JIRO SHIRAMATSU: "Key to successful operations of a 16 million tonne complex - Fukuyama works", IRON AND STEEL ENGINEER, vol. 53, no. 11, November 1976 (1976-11-01), PITTSBURGH, U.S.A., pages 48 - 59, XP001408674  
• [P] PATENT ABSTRACTS OF JAPAN vol. 004, no. 019 (C - 73)<152> 16 February 1980 (1980-02-16)

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Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0023716 A1 19810211; EP 0023716 B1 19850731**; AU 538700 B2 19840823; AU 6099180 A 19810205; BR 8004864 A 19810210; DE 3070920 D1 19850905; US 4377277 A 19830322

DOCDB simple family (application)  
**EP 80104566 A 19800801**; AU 6099180 A 19800801; BR 8004864 A 19800801; DE 3070920 T 19800801; US 17444580 A 19800801